Amendments to the Claims:

Please cancel claims 1-31 and add new claims 32-81. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-31 (canceled)

32 (new): A mass spectrometry probe comprising:

(a) a sample presenting surface, wherein the sample presenting surface is a surface of the probe;

(b) energy absorbing molecules immobilized by chemical bonding to the sample presenting surface; and

(c) an affinity reagent immobilized by chemical bonding to the sample presenting surface, wherein the energy absorbing molecules are different from the affinity reagent.

33 (new): The probe of claim 32, wherein the sample presenting surface does not have additional matrix molecules.

34 (new): The probe of claim 32, wherein the probe comprises metal.

35 (new): The probe of claim 32, wherein the energy absorbing molecules are covalently bound to the sample presenting surface.

36 (new): The probe of claim 32, wherein the energy absorbing molecules and affinity reagent are arranged on the sample presenting surface in a predetermined array.

37 (new): The probe of claim 32, wherein the energy absorbing molecules are selected from the group consisting of dimethoxy hydroxycinnamic acid, cinnamamide, cinnamyl bromide, dihydroxybenzoic acid, and cyanohydroxycinnamic acid.

38. (new): The probe of claim 32, wherein the affinity reagent is covalently bound to the sample presenting surface.

39. (new): The probe of claim 32, wherein the affinity reagent is selected from the group consisting of a metal ion, a protein, a peptide, a nucleic acid and a dye.

40. (new): The probe of claim 39, wherein the affinity reagent comprises a metal ion.

41. (new): The probe of claim 40, wherein the metal ion is selected from copper or iron.

42. (new): The probe of claim 39, wherein the affinity reagent comprises a protein or peptide.

43 (new): The probe of claim 42, wherein the protein or peptide is an immunoglobulin.

44 (new): The probe of claim 39, wherein the affinity reagent comprises a nucleic acid.

45 (new): The probe of claim 44, wherein the nucleic acid is DNA.

46 (new): The probe of claim 32, wherein the analyte comprises a protein.

47 (new): The probe of claim 32, wherein the analyte comprises a nucleic acid.

48 (new): The probe of claim 32, wherein the analyte is bound to the affinity reagent.

49 (new): A method for detecting an analyte comprising:

(a) capturing an analyte on a sample presenting surface of a mass spectrometry probe, wherein the sample presenting surface is a surface of the probe, wherein the probe comprises (i) energy absorbing molecules immobilized by chemical bonding to the sample presenting surface, (ii) an affinity reagent immobilized by chemical bonding to the sample presenting surface, wherein the energy absorbing molecules are different from the affinity reagent, wherein the analyte is not dispersed in a matrix crystalline structure, but is presented within, on or above the energy absorbing molecules; and

(b) detecting the captured analyte by laser desorption/ionization mass spectrometry.

50. The method of claim 49, wherein additional matrix molecules are not added.

51 (new): The method of claim 49, wherein the energy absorbing molecules are covalently bound to the sample presenting surface.

52 (new): The method of claim 49, wherein the energy absorbing molecules and affinity reagent are arranged on the sample presenting surface in a predetermined array.

53 (new): The method claim 49, wherein the energy absorbing molecules are selected from the group consisting of dimethoxy hydroxycinnamic acid, cinnamamide, cinnamyl bromide, dihydroxybenzoic acid, and cyanohydroxycinnamic acid.

54. (new): The method of claim 49, wherein the affinity reagent is covalently bound to the sample presenting surface.

55. (new): The method of claim 49, wherein the affinity reagent is selected from the group consisting of a metal ion, a protein, a peptide, a nucleic acid and a dye.

56. (new): The method of claim 55, wherein the affinity reagent comprises a metal ion selected from copper or iron.

57. (new): The method of claim 55, wherein the affinity reagent comprises an immunoglobulin.

58 (new): The method of claim 55, wherein the affinity reagent comprises DNA.

59 (new): The method of claim 49, wherein the sample is selected from the group consisting of blood, tears, urine, saliva, gastrointestinal fluids, spinal fluid, amniotic fluid, bone marrow, bacteria, viruses, cells in culture, biopsy tissue, plant tissue or fluids and insect tissue or fluids.

60 (new): The method of claim 49, wherein the analyte comprises a protein.

61 (new): The method of claim 49, wherein the analyte comprises a nucleic acid.

62 (new): The method of claim 61, wherein the nucleic acid is DNA.

63 (new): A mass spectrometry apparatus comprising:

(a) a probe comprising:

i. a sample presenting surface;

ii. energy absorbing molecules immobilized by chemical bonding to the sample presenting surface;

iii. an affinity reagent capable of binding an analyte immobilized by chemical bonding to the sample presenting surface; and

iv. an analyte that is not dispersed in a matrix crystalline structure, but is presented within, on or above the energy absorbing molecules, wherein the energy absorbing molecules are different from the affinity reagent;

(b) an energy source that directs laser energy to the sample presenting surface for desorbing and ionizing the analyte;

(c) a detector that detects the desorbed, ionized analyte

(d) a spectrometer tube into which ionized analyte is accelerated;

(e) means for applying an accelerating electrical potential to the desorbed, ionized analyte; wherein the mass spectrometer is a time-of-flight mass spectrometer; and

(f) vacuum means for applying a vacuum to the interior of the tube.

64. The probe of claim 63, wherein the sample presenting surface does not have additional matrix molecules.

65 (new): The apparatus of claim 63, wherein the detector comprises an electron multiplier.

66 (new): The apparatus of claim 63, wherein the energy source is energy from a nitrogen laser or an Nd-YAG laser.

67 (new): The apparatus of claim 63, wherein the energy absorbing molecules are noncovalently bound to the sample presenting surface.

68 (new): The apparatus of claim 63, wherein the energy absorbing molecules are covalently bound to the sample presenting surface.

69 (new): The apparatus of claim 63, wherein the energy absorbing molecules are selected from the group consisting of dimethoxy hydroxycinnamic acid, cinnamamide, cinnamyl bromide, dihydroxybenzoic acid, and cyanohydroxycinnamic acid.

70. (new): The apparatus of claim 63, wherein the affinity reagent is noncovalently bound to the sample presenting surface.

71. (new): The apparatus of claim 63, wherein the affinity reagent is covalently bound to the sample presenting surface.

72. (new): The apparatus of claim 63, wherein the affinity reagent is selected from the group consisting of a metal ion, a protein, a peptide, a nucleic acid and a dye.

73. (new): The apparatus of claim 72, wherein the affinity reagent comprises a metal ion.

74. (new): The apparatus of claim 73, wherein the metal ion is selected from copper or iron.

75. (new): The apparatus of claim 72, wherein the affinity reagent comprises a protein or peptide.

76 (new): The apparatus of claim 75, wherein the protein or peptide is an immunoglobulin.

77 (new): The apparatus of claim 72, wherein the affinity reagent comprises a nucleic acid.

78 (new): The apparatus of claim 77, wherein the nucleic acid is DNA.

79 (new): The apparatus of claim 63, wherein the analyte comprises a protein.

80 (new): The apparatus of claim 63, wherein the analyte comprises a nucleic acid.

81 (new): The apparatus of claim 80, wherein the nucleic acid is DNA.